

WHAT IS CLAIMED IS:

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A1
1. A method of protecting debris-intolerant micromechanical devices, said method comprising:
    - attaching a device to a substrate, said device having at least one debris-generating region which source debris over the lifetime of said device, and at least one debris-intolerant region; and
    - encapsulating at least one of said debris-generating regions with a blocking material, said blocking material avoiding contact with said debris-intolerant region.
  2. The method of Claim 1, said attaching step further comprising:
    - attaching a device to a substrate, said device having at least one said debris-generating region comprising a sidewall formed where said device was attached to a wafer.
  3. The method of Claim 1, said encapsulating step further comprising:
    - encapsulating at least one of said debris-generating regions using an adhesive blocking material.
  4. The method of Claim 1, said encapsulating step further comprising:
    - encapsulating at least one of said debris-generating regions using a photo-curable adhesive blocking material.
  5. The method of Claim 1, said encapsulating step further comprising:
    - encapsulating at least one of said debris-generating regions using an adhesive blocking material that remains tacky to perform a gettering function.
  6. The method of Claim 1, said encapsulating step comprising the steps of:
    - encapsulating portions of said device with said blocking material; and

removing said blocking material from said debris-intolerant regions.

7. The method of Claim 1, further comprising the step of:

electrically connecting at least one bond pad on said substrate with at least one bond pad on said device using an electrical connection.

5 8. The method of Claim 7, said encapsulating step comprising:

encapsulating at least one of said debris-generating regions and said electrical connection.

9. The method of Claim 7, said encapsulating step comprising:

electrically connecting at least one bond pad on said substrate with at least one bond pad on said device using a bond wire.

10. The method of Claim 7, said encapsulating step comprising:

encapsulating at least one of said debris-generating regions and said bond wires.

11. A packaged micromechanical device comprising:

a package substrate;

a micromechanical device supported by said package substrate, said micromechanical device having at least one debris-generating region;

blocking material attached to said device and covering at least one said debris-generating region; and

a package lid supported by said package substrate and enclosing said micromechanical device and said blocking material.

12. The device of Claim 11, at least one said debris-generating regions comprising a sidewall formed where said device was attached to a wafer.

13. The device of Claim 11, said blocking material comprising an adhesive.

14. The device of Claim 11, said blocking material comprising an photo-curable adhesive.

15. The device of Claim 11, said blocking material comprising an adhesive that remains tacky to perform a gettering function.

16. The device of Claim 11, further comprising:

5                   electrical connections between said device and said package substrate, said blocking material encapsulating said electrical connections.

TI-24980